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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/784,891

02/24/2004

Hirotoomi Nemoto

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EXAMINER

EPFS, TODD MICHAEL

ART UNIT

PAPER NUMBER

3632

NOTIFICATION DATE

DELIVERY MODE

05/01/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DCIPDocket@arentfox.com
IPMatters@arentfox.com
Patent_Mail@arentfox.com

Office Action Summary	Application No. 10/784,891	Applicant(s) NEMOTO ET AL.	
	Examiner Todd M. Epps	Art Unit 3632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is a final Office Action for serial number 10/784,891, Anti-Vibration Support System For Engine, filed February 24, 2004.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,422,546 B1 to Nemoto et al. (Nemoto) in view of U.S. Patent No. 6,427,662 to Tanaya et al (Tanaya).

Nemoto discloses an elastic member (14), a liquid chamber (24), a movable member (20), an actuator (29), wherein the vibration of the engine is prevented from being transmitted to a vehicle body frame by controlling a supply of electric current (U) to actuator (29); an elastic member (14) is formed from rubber; the movable member (20) is vertically movable and includes a shaft portion extending into an actuator (29); an actuator (29) includes an outer shell defined by an actuator housing (30); a yoke (32) is fixed to a lower portion of an actuator housing (30), and a coil (34); a disk-shaped armature (38) is slidably supported on an inner peripheral surface of an actuator housing (30) and opposite an upper surface of a coil (34); a biasing member (42) is disposed between an armature (38) and a bobbin (33) around which coil (34) is wound

Art Unit: 3632

and biases an armature upward; a cylindrical slider (43) is slidably fitted a cylindrical portion of a yoke (32) and includes a boss (44) to which a shaft portion (20a) of a movable member (20); a cylindrical bearing (36) is slidably fitted between a cylindrical portion of a yoke (32) and a cylindrical slider (43); a coiled biasing member (41) is disposed between a cylindrical bearing (36) and a cylindrical slider (43), and a coiled biasing member biases a cylindrical bearing (36) and cylindrical slider (43) in respective opposite directions. However, Nemoto '546 discloses the previous invention failing to specifically teach wherein an active anti-vibration supporting device is prohibited when an abnormality in an operational state of the engine is detected. Nevertheless, Tanaya '662 discloses a knock control apparatus with a detector for extracting a vibration in the event that the frequency of abnormalities exceeds a predetermined value, the knock control is prohibited, knock detection can be made even immediately following noise, and further knock control is prohibited when judgment is made that the abnormality detected is not an instantaneous abnormality, so the engine can be operated in a safer manner (col. 9, lines 6-15). Although, Nemoto '546 discloses an electronic control unit (U) with different measurement sensors (S), it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the control unit of Nemoto '546 to be programmable to include the control apparatus with a detector as taught by Tanaya '662 because one would have motivated to provide communication to the actuator to reduce the vibration of the engine, which allows the engine to be operated in a safer manner.

Claims 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,422,546 B1 to Nemoto et al. (Nemoto) in view of U.S. Patent No. 6,427,662 to Tanaya et al (Tanaya).

Nemoto discloses an elastic member (14), a liquid chamber (24), a movable member (20), an actuator (29), wherein the vibration of the engine is prevented from being transmitted to a vehicle body frame by controlling a supply of electric current (U) to actuator (29); an elastic member (14) is formed from rubber; the movable member (20) is vertically movable and includes a shaft portion extending into an actuator (29); an actuator (29) includes an outer shell defined by an actuator housing (30); a yoke (32) is fixed to a lower portion of an actuator housing (30), and a coil (34); a disk-shaped armature (38) is slidably supported on an inner peripheral surface of an actuator housing (30) and opposite an upper surface of a coil (34); a biasing member (42) is disposed between an armature (38) and a bobbin (33) around which coil (34) is wound and biases an armature upward; a cylindrical slider (43) is slidably fitted a cylindrical portion of a yoke (32) and includes a boss (44) to which a shaft portion (20a) of a movable member (20); a cylindrical bearing (36) is slidably fitted between a cylindrical portion of a yoke (32) and a cylindrical slider (43); a coiled biasing member (41) is disposed between a cylindrical bearing (36) and a cylindrical slider (43), and a coiled biasing member biases a cylindrical bearing (36) and cylindrical slider (43) in respective opposite directions. However, Nemoto '546 discloses the previous invention failing to specifically teach wherein a cylinder suspension of the engine is prohibited when an abnormality in an operational state of an active anti-vibration supporting device is

Art Unit: 3632

detected. Nevertheless, Tanaya '662 discloses a knock control apparatus with a detector for extracting a vibration in the event that the frequency of abnormalities exceeds a predetermined value, the knock control is prohibited, knock detection can be made even immediately following noise, and further knock control is prohibited when judgment is made that the abnormality detected is not an instantaneous abnormality, so the engine can be operated in a safer manner (col. 9, lines 6-15). Although, Nemoto '546 discloses an electronic control unit (U) with different measurement sensors (S), it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the control unit of Nemoto '546 to be programmable to include the control apparatus with a detector as taught by Tanaya '662 because one would have motivated to provide communication to the actuator to reduce the vibration of the engine, which allows the engine to be operated in a safer manner.

Response to Arguments

Applicant's arguments filed February 13, 2009 have been fully considered but they are not persuasive.

In response to applicant's argument that the Tanaya '662 reference does not teach or disclose that the knock control apparatus is prohibited when an abnormality in an operation state of the engine is detected. The Examiner respectfully disagrees. Attention is directed to Tanaya '662, col. 9, lines 7-9, "*in the event that the frequency of abnormalities exceeds a predetermined value, knock control is prohibited*". In other words, a knock control is prohibited in Tanaya '662 reference wherein the knock control

Art Unit: 3632

(anti-vibration supporting device) for an internal combustion engine includes a knock detector for extracting a vibration component. Thus, knock detection can be made immediately following vibration from the knock pulses generated in the engine set with a maximum predetermined value. In this case, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the control unit of Nemoto '546 to be programmable to include the control apparatus with a detector as taught by Tanaya '662 because one would have motivated to provide communication to the actuator to reduce the vibration of the engine, which allows the engine to be operated in a safer manner.

With respect to claim 11, the applicant will see with the stated reason above, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the control unit of Nemoto '546 to be programmable to include the control apparatus with a detector as taught by Tanaya '662 because one would have motivated to provide communication to the actuator to reduce the vibration of the engine, which allows the engine to be operated in a safer manner.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Todd M. Epps whose telephone number is (571) 272-8282 – or – whose e-mail address is Todd.Epps@uspto.gov. The examiner can normally be reached on M-F (7:30-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. Allen Shriver can be reached on 571-272-6698. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/784,891
Art Unit: 3632

Page 8

/T.M.E./

Todd M. Epps
Patent Examiner
Art Unit 3632
April 22, 2009

/J. ALLEN SHRIVER II/
Supervisory Patent Examiner, Art Unit 3632